

Abstract of the Disclosure:

On producing an antireflection-coated substrate which includes a transparent substrate (1) and an antireflection film formed on the transparent substrate, the antireflection film is made of a multilayer film having a medium refractive index layer (2), a high refractive index layer (3), and a low refractive index layer (4) successively formed on the transparent substrate in this order. The medium refractive index layer is made of a material containing silicon, tin, and oxygen. The high refractive index layer is made of a material containing oxygen and at least one element selected from a group consisting of titanium, niobium, tantalum, and hafnium. The low refractive index layer is made of a material containing silicon and oxygen. The antireflection film is formed by successively depositing these layers by an in-line sputtering apparatus.